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### ***Research Interests***

In type 2 diabetes, it has become evident that the main determinant for an individual to become diabetic is the ability of the pancreas to increase insulin production. The increase in insulin production results from an increase in the number of insulin-producing cells ( $\beta$  cells). The major interest of my studies is the investigation of the mechanisms involved with the regulation of  $\beta$ -cell mass. We have generated genetically modified mice to study the role of  $\beta$ -cell replication, neogenesis, and apoptosis. More specifically, I will be studying the mechanisms involved with the proliferative responses induced by Akt and the role of this kinase in the adaptation to animal models of diabetes. These experiments will elucidate new mechanisms involved with the development and/or cure of diabetes by augmenting the knowledge of the regulation of the life and death of  $\beta$  cells, a key factor for diabetes.

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